

REMARKS

Claims 1-16 are pending in this application. Claims 1-3, 5, 7, 8, 13 and 14 are amended herein.

The amendments to the claims 1-3, 5, 13 and 14, clarify the wording of the phrase “a conductive film formed on a base substrate through an insulation film” to --a conductive film formed on an insulation film, the insulation film being formed on a base substrate--.

The amendments to claims 7 and 8 clarify that the third film is formed on the insulation film.

Claims 1-16 are rejected under 35 U.S.C. 103(a) as unpatentable over Kazue (JP 11-68253) in view of Takemura (JP 4-98841) and further in view of Misawa (U.S. Patent No. 6,150,725).

Reconsideration of the rejection is respectfully requested. The Examiner asserts that Kazue discloses an electrode structure where a conductive film (metallic film 13) is formed on a substrate through an insulating film (polyimide layer 12).

In Kazue, the metallic film 13 penetrates the polyimide layer 12.

On the other hand, in the present invention, a conductive film does not penetrate an insulation film. In the present invention, the conductive film is formed on the insulation film, and the insulation film is formed on a base substrate.

Therefore, Kazue does not provide the indicated electrode structure, and Kazue is irrelevant to the present invention.

The present invention is characterized in that the insulation film is formed below the conductive film, and the insulation film comprises a plurality of poles of polyimide, a first film

formed on side surfaces of the poles and formed of an insulation material having a higher hardness than polyimide, and a second film of polyimide buried among said plurality of poles. In other words, in the present invention, cylindrical films (the first film) are buried in the polyimide film (the poles and the second film).

An insulation film having such structure is neither disclosed nor suggested in the cited references.

In the present invention, since the film of a high hardness is formed on the side surfaces of the poles of polyimide, the poles and the second film are prevented from being distorted, even when a strong force is applied upon the conductive film. Therefore, the conductive film is prevented from peeling off, even in the case that a thick polyimide layer is formed below the conductive film. In the present invention, since the thick polyimide layer is formed below the conductive film, parasitic capacity between the conductive film and the lower layer is small, whereby radio-frequency signals can be used.

This technique of the present invention is neither disclosed nor suggested in the cited references.

As described above, it would not have been unobvious to one of ordinary skill in the art at the time the invention was made to have applied the teaching of Kazue in view of Takemura and further in view of Misawa.

Attached hereto is a marked-up version of the changes made to the by the current amendment. The attached page is captioned "**Version with markings to show changes made.**"

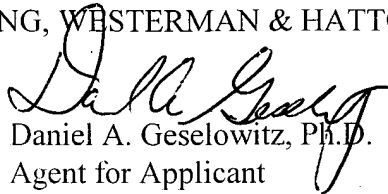
Amendment under 37 CFR 1.116
Shigeo OHSAKA et al.

U.S. Patent Application S.N. 09/456,531
Attorney Docket No. 991387

In the event that this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully Submitted,

ARMSTRONG, WESTERMAN & HATTORI, LLP


Daniel A. Geselowitz, Ph.D.
Agent for Applicant
Reg. No. 42,573

DAG/plb
Atty. Docket No. **991387**
Suite 1000, 1725 K Street, N.W.
Washington, D.C. 20006
(202) 659-2930



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PATENT TRADEMARK OFFICE

Enclosures: Version with markings to show changes made

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VERSION WITH MARKINGS TO SHOW CHANGES MADE 09/456,531

IN THE CLAIMS:

Please amend claims 1-3, 5, 7, 8, 13 and 14 as follows:

1. (Amended) An electrode structure including a conductive film formed on ~~a base substrate~~
~~through~~ an insulation film, the insulation film being formed on a base substrate,

the insulation film comprising a plurality of poles of polyimide, a first film formed on side surfaces of the poles and formed of an insulation material having a higher hardness than polyimide, and a second film of polyimide buried among said a plurality of poles with the first film formed on the side surfaces thereof.

2. (Amended) An electrode structure including a conductive film formed on ~~a base substrate~~
~~through~~ an insulation film, the insulation film being formed on a base substrate,

the insulation film comprising a first film of polyimide having a plurality of openings which reach the base substrate, a second film formed on inside walls of the openings and formed of an insulation material having a higher hardness than polyimide, and a plurality of poles of polyimide buried in the openings with the second film formed on the inside walls thereof.

3. (Amended) A semiconductor light-emitting device having an electrode structure including a conductive film formed on ~~a base substrate through~~ an insulation film, the insulation film being formed on a base substrate,

the insulation film comprising a plurality of poles of polyimide, a first film formed on side surfaces of the poles and formed of an insulation material having a higher hardness than polyimide,

and a second film of polyimide buried among said a plurality of poles with the first film formed on side surfaces thereof.

5. (Amended) A semiconductor light-emitting device having an electrode structure including a conductive film formed on a base substrate through an insulating film, the insulation film being formed on a base substrate.

the insulation film comprising a first film of polyimide having a plurality of openings which reach the base substrate, a second film formed on inside walls of the openings and formed of an insulation material having a higher hardness than polyimide, and a plurality of poles of polyimide buried in the openings with the second film formed on the inside walls thereof.

7. (Twice Amended) A semiconductor light-emitting device according to claim 3, wherein the conductive film is formed on the insulation film through a third film of an insulation material, the third film is formed on the insulation film.

8. (Twice Amended) A semiconductor light-emitting device according to claim 5, wherein the conductive film is formed on the insulation film through a third film of an insulation material, the third film is formed on the insulation film.

13. (Twice Amended) A semiconductor light-emitting device including a waveguide, a lower electrode formed below the waveguide, and an upper electrode formed above the waveguide,

the upper electrode having an electrode structure,

the electrode structure including a conductive film formed ~~on a base substrate through an~~
insulation film, the insulation film being formed on a base substrate.

the insulation film comprising a plurality of poles of polyimide, a first film formed on side surfaces of the poles and formed of an insulation material having a higher hardness than polyimide, and a second film of polyimide buried among said a plurality of poles with the first film formed on the side surfaces thereof.

14. (Twice Amended) A semiconductor light-emitting device including a waveguide, a lower electrode formed below the waveguide, and an upper electrode formed above the waveguide, the upper electrode having an electrode structure, the electrode structure including a conductive film formed on ~~a base substrate through an~~ insulation film, the insulation film being formed on a base substrate.

the insulation film comprising a first film of polyimide having a plurality of openings a first film of polyimide having a plurality of openings which reach the base substrate, a second film formed on inside walls of the openings and formed of an insulation material having a higher hardness than polyimide, and a plurality of poles of polyimide buried in the openings with the second film formed on the inside walls thereof.